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## The Impact of Big Data and Information Technology on the Accounting Field and Business Environment

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CHP COVID-19 Thesis Progress Form

The Impact of Big Data and Information Technology on the Accounting Field and  
Business Environment

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### **Methods**

#### *Participants*

For this study, participants were accountants currently working in the public accounting sphere. A total of 4 accountants were reached to discuss interviews. However, due to COVID-19 closures and cancellations, none of my selected interviews were able to commence.

#### *Procedures*

For this study, I engaged in available subjects sampling, otherwise known as convenience or haphazard sampling. While this form of sampling has an overall higher risk due to having little to no control over the representativeness of the sample, this method was the most effective for this study. Because I wanted my sample population to be public accountants, it made sense to sample those in the Knoxville area. Knoxville is home to a variety of low and medium level accounting firms, and many large to Big Four firms do recruiting for the Southeast here. In addition, I felt this would also have a wider range of subjects to gather a wider assessment of technological proficiency and usage by different service lines. I recruited participants through in-person meetings. I met with many public speakers through UT's Beta Alpha Psi chapter, for which we often have a weekly speaker discuss current issues in the accounting sphere. After each meeting, I would stay behind and ask speakers if they were interested in speaking further on the subject.

For this study, I used the interview research method. For those who accepted interviews, I emailed participants asking when a convenient time for the interview would be. For these interviews, I planned to do either phone interviews or Zoom conference calls, depending on their preferences. To get willing participants, I ensured that, along with the scheduling email, participants were sent the informed consent form, wherein participants were asked with either accepting or declining

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their participation. As I asked many of my interview candidates prior, this did not become an issue for many, but did provide additional confirmation. For participants who did consent, they were also asked to return a date and time where they would be able to interview.

### **Demographic**

To ensure greater accuracy of information, I planned a combination of common demographic questions along with questions regarding previous experiences with various accounting technologies. In order to accurately describe the sample, I included questions that relate to their age, current employer, office location, service line, and years of experience. These questions were used to gain an accurate view of the current working environment and help assess whether geographic or specialization had an impact on their findings.

### **Other Measures**

In addition to the demographic questions, I asked short- answer questions regarding the importance of information technology for the accounting field overall. These questions are designed to gather in-depth information regarding each participants general use of these technologies. In addition, I asked participants questions regarding their personal use of these technologies in their daily roles. The participants were asked to rate these answers on a 1-10 scale, with 1 representing little to no impact and 10 representing essential to daily tasks. These answers were meant to be compared to their individual responses to their perceived importance, as well as public releases from accounting firms and supplementary materials to help get a better view of the professional environment regarding technology use and how that compared to the individual use and perception.

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### **Discussion**

While initially I had 5 accountants who were willing for interviews, complications arising due to the COVID-19 outbreak has resulted in all participants dropping out due to lack of public information regarding the pandemic.

For this study, my hypothesis was that there was that accountants perceive information technology, as well as its maintenance and upkeep, with less importance than what is stated through public releases by the firms. This was meant to be assessed by receiving personal testimony from current public accountants across various fields and practices and compare those to research papers and other documentation. If my hypothesis would have been proven correct, it could help inform new and current accountants need to enhance technical knowledge and experience to better match the overall opinion. In addition, this study was also designed to assess the overall impact of information technology on the field via a cost-benefit analysis. Comparing how these technological advancements have made the accountant's job easier (automation of certain processes, easier storage and access to documents, etc.) to how they make the accountant's job more difficult (e.g. heavier regulation, increasing need for technical skillsets, etc.). Through this, I wanted to make a case that information technology, while having great effects on the field, has radically changed the requirements for accountants to succeed in prior roles, and that new skillsets need to be taught to improve the practice.

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If my hypotheses had proven incorrect, I would have attempted some more interviews and expanded my sample size in later research. Convenience sampling for this study may have resulted in results that do not accurately reflect the population. I would also add additional questions regarding their initial technical knowledge upon entering the public accounting sphere. I also would interview exiting accounting majors from the University of Tennessee, Knoxville who have had prior accounting experience to compare to working professionals to assess if firms are consistently educating employees on these skills. These could help infer whether accounting firms are relying on new hires having these skills prior to starting work or hiring traditional accountants and training them on the IT aspects unique to their position.

For future researchers addressing these concerns, some potential areas of interest include assessing potential discrepancies between skills taught by university environments versus those required by employers. Future researchers could also evaluate the pro's and con's of allowing remote access to vital accounting or audit information via the internet. In addition, further study could be given to the adoption of blockchain technology into the public audit sphere and how publicity of transaction information could dramatically change the role of the auditor.

### **Background**

While information systems have become a key component to successful operation, successful technical skills are not a key skill for the typical accountant. Many of the current industry professionals are specialized in the traditional methods of accounting and their individual skillsets rather than possessing standardized computer knowledge. To this end, the effects of a faulty system or imprecise usage of these systems by accounting professionals could pose severe problems for not only the accounting field, but also the clients and businesses they serve. Data security, computer glitches, and inefficient systems management have been

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introduced to a business environment with professionals largely unprepared to handle these issues. Have the introduction of these new technologies changed the accounting field? How well have current accountants adjusted to these changes? Are new entrants to the field properly equipped to face the challenges faced via increasingly tech-savvy clients?

This study is primarily relevant to accountants operating in a continually digitizing environment, as well as the businesses they serve. The public accounting sphere serves a vital role in maintaining investor confidence and has access to high-priority information regarding hundreds of businesses. Poor data management could lead to a variety of large-scale errors with disastrous consequences.

The role of the accountant to provide relevant, reliable information to the public is essential to the modern business environment, especially the public equity markets, so ensuring accountants can continue to perform high quality services is essential to continued operation.

The conclusions of this study will help guide organizations to better train and adapt to emerging industry problems and help accountants better manage with current developments in information technology and their impact on the organization.

This study is also significant to educational organizations, such as universities and accounting groups such as the American Institute for Certified Public Accountants (AICPA) and the International Federation of Accountants (IFAC), to better equip and train new entrants to the industry to handle the challenges faced through the implementation of information technology in the accounting field.